



US Army Corps
of Engineers®

Engineer Research and
Development Center

Digital Topographic Support System – Base

Description and Background

The **Digital Topographic Support System-Base (DTSS-B)** (formerly known as the Topographic Imagery Integration Prototype (TIIP)) is the result of a **US Army Europe (USAREUR)** initiative to develop the capability to generate terrain information over sparsely mapped areas to support training and mission rehearsal/contingency operations. The need for this capability was highlighted by experiences in Desert Shield/Desert Storm and the former Yugoslavia.

System

The DTSS-B consists of multiple workstations designed to operate at Theater level in a base-production, garrison environment. The DTSS-B has increased data production capabilities over the other DTSS configurations, as well as enhanced feature and elevation data extraction tools. The DTSS-B is augmented with a direct link to commercial and **National Technical Means (NTM)** imagery. The DTSS-B also has increased data storage, management, and distribution/dissemination tools.

Key Capabilities

The DTSS-B is designed to augment **National Imagery and Mapping Agency (NIMA)** capabilities at the Theater level by providing quick-response special purpose mapping, terrain analysis, and terrain-related IPB in areas of obsolete/outdated information or data. The system can produce products such as **Digital Terrain Elevation Data (DTED)**, image map substitutes, 3-D terrain visualization, and operation/decision graphics. The DTSS-B can also update and produce **Topographic Line Maps (TLMs)** and create **Intelligence Preparation of the Battlefield (IPB)** products. Product response time varies from 10 minutes to 36 hours depending on the complexity of the product. Products range from simple image maps through contoured orthophoto maps to extensive 3-D terrain fly-throughs.

The DTSS-Base is unique in that it is the only DTSS configuration with six analogous functions or functional slices. These include: 1. *Imagery Slice* to ingest and process NTM imagery, extract 3D features, generate and enhance DTED, process multi-spectral images, and support IPB; 2. *Production Slice* to produce TDAs, value-added data, map products, and 3D visualization products; 3. *Database Slice* to store and manage data online with an automated archival capability; 4. *Map Server Slice* to provide a web accessible digital database of products and data; 5. *Output Slice* to output hardcopy maps and limited reproduction of digital products; 6. *Media Replication Slice* to replicate electronic storage media for dissemination.

Current Status

There are three DTSS-B locations including **US Army Pacific (USARPAC)** at the 29th Engr Bn in Hawaii, **Forces Command (FORSCOM)** at the 30th Engr Bn in North Carolina, and **USAREUR** at the 60th Engr Det in Germany. Systems at these locations currently consist of a mix of hardware and software. The hardware is maintained by the **Combat Terrain Information Systems (CTIS)** hardware maintenance program and the software is maintained by the individual gaining unit. Since being issued, the DTSS-B has been type classified - standard. The three DTSS-B upgrades were officially fielded in 1QFY03.

Point of Contact

Dennis Scholl, dscholl@tec.army.mil, COMM: (703) 428-7132, DSN: 328-7132

